

SEQUENCE LISTING

<110> Cao, Liangxian  
 Trifillis, Panayiota

<120> METHODS FOR IDENTIFYING COMPOUNDS THAT MODULATE UNTRANSLATED  
 REGION-DEPENDENT GENE EXPRESSION AND METHODS OF USING SAME

<130> 10589-012-999

<140>  
 <141> 2004-01-21 (371c date)

<150> PCT/US2004/001643  
 <151> 2004-01-21

<150> 60/441,637  
 <151> 2003-01-21

<160> 94

<170> PatentIn version 3.2

<210> 1  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: one motif of G-quartet element

<220>  
 <221> misc\_feature  
 <222> 3, 7, 8, 11  
 <223> n = a, t, c, or g

<220>  
 <221> misc\_feature  
 <222> (7)..(8)  
 <223> This represents one form of the sequence as described, other forms  
 described may have up to five nucleotides in this variable region

<400> 1  
 ggntggnnng ntgg 14

<210> 2  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: one motif of G-quartet element

<220>  
 <221> misc\_feature  
 <222> 3, 4, 7, 8, 11, 12  
 <223> n = a, t, g or c

<220>  
 <221> misc\_feature  
 <222> (2)..(12)  
 <223> This represents one form of the sequence as described, other forms  
 described have longer variable regions, typical is 2 - 10  
 nucleotides

<400> 2  
 ggnnggnngg nngg 14

<210> 3  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: general formula of G-quartet  
 element

<220>  
 <221> misc\_feature  
 <222> 3, 4, 7, 8, 11, 12  
 <223> n = a, t, g, or c

<220>  
 <221> misc\_feature  
 <222> (2)..(12)  
 <223> This represents one form of the sequence as described, other forms  
 described have longer variable regions, typical is 2 - 10  
 nucleotides

<400> 3  
 ggnnggnngg nngg 14

<210> 4  
 <211> 19  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: one subunit of 15-LOX-DICE

<400> 4  
 ccccrcccuc uuccccaag 19

<210> 5  
 <211> 152  
 <212> DNA  
 <213> Homo sapiens

<400> 5

gcagaggacc agctaagagg gagagaagca actacagacc cccctgaaa acaaccctca 60  
gacgccacat cccctgacaa gctgccaggc aggttctctt cctctcacat actgaccac 120  
ggctccaccc tctctcccct ggaaaggaca cc 152

<210> 6  
<211> 792  
<212> DNA  
<213> Homo sapiens

<400> 6  
tgaggaggac gaacatccaa ccttcccaaa cgctcccct gccccaatcc ctttattacc 60  
ccctccttca gacaccctca acctcttctg gctcaaaaag agaattgggg gcttagggtc 120  
ggaacccaag cttagaactt taagcaacaa gaccaccact tcgaaacctg ggattcagga 180  
atgtgtggcc tgcacagtga attgctggca accactaaga attcaaactg gggcctccag 240  
aactcactgg ggctacagc tttgatccct gacatctgga atctggagac cagggagcct 300  
ttggttctgg ccagaatgct gcaggacttg agaagacctc acctagaaat tgacacaagt 360  
ggaccttagg ccttcctctc tccagatggt tccagacttc cttgagacac ggagcccagc 420  
cctccccatg gagccagctc cctctattta tgtttgcact tgtgattatt tattatttat 480  
ttattattta tttatttaca gatgaatgta tttatttggg agaccggggg atcctggggg 540  
accaatgta ggagctgcct tggctcagac atgttttccg tgaaaacgga gctgaacaat 600  
aggctgttcc catgtagccc cctggcctct gtgccttctt ttgattatgt tttttaaaat 660  
atztatctga ttaagttgtc taaacaatgc tgatttggtg accaactgtc actcattgct 720  
gagcctctgc tcccagggg agttgtgtct gtaatcgccc tactattcag tggcgagaaa 780  
taaagtttgc tt 792

<210> 7  
<211> 21  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Group I AU-Rich element (ARE)  
cluster of 3'untranslated region

<400> 7  
auuuuuuuau uuauuuuuu a 21

<210> 8  
<211> 40  
<212> DNA  
<213> Homo sapiens

<400> 8

kctggaggat gtggctgcag agcctgctgc tcttgggcac 40

<210> 9  
 <211> 289  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
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 gaccaagggg tgggccacag ccatgggtggg agtggcctgg acctgccctg ggccacactg 120  
 accctgatac aggcatggca gaagaatggg aatattttat actgacagaa atcagtaata 180  
 tttatatatt tatattttta aaatatattt ttattttatt atttaagttc atattccata 240  
 tttattcaag atgttttacc gtaataatta ttattaaaaa tatgcttct 289

<210> 10  
 <211> 21  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Group I AU-Rich element (ARE)  
 cluster of 3'untranslated region

<400> 10  
 auuuuuuuau uuauuuuuu a 21

<210> 11  
 <211> 47  
 <212> DNA  
 <213> Homo sapiens

<400> 11  
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<210> 12  
 <211> 307  
 <212> DNA  
 <213> Homo sapiens

<400> 12  
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 taaaactata aatatggatc ttttatgatt ctttttgtaa gccctagggg ctctaaaatg 180  
 gtttacctta tttatcccaa aaatatattt tattatgttg aatgttaa atagtatcta 240  
 tgtagattgg ttagtaaaac tatttaataa atttgataaa tataaaaaaa aaaaacaaaa 300  
 aaaaaaa 307

<210> 13  
 <211> 15  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE)  
 cluster of 3'untranslated region  
  
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 <222> (1)..(15)  
 <223> n = a, t, g or c  
  
 <400> 13  
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 <210> 14  
 <211> 62  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 14  
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 ct 62  
  
 <210> 15  
 <211> 427  
 <212> DNA  
 <213> Homo sapiens  
  
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 aactatTTTT aattatTTTT aatttattaa tatttaaata tgtgaagctg agttaattta 180  
 tgtaagtcatt atttatattt ttaagaagta ccacttgaaa catttttatgt attagttttg 240  
 aaataataat ggaaagtggc tatgcagttt gaatatcctt tgtttcagag ccagatcatt 300  
 tcttggaag tgtaggctta cctcaaataa atggctaact tatacatatt tttaaagaaa 360  
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 <210> 16  
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 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE)

cluster of 3'untranslated region

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<220>
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<223> n = a, t, g or c

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nauuuauuuu uuuuau                                     15

<210> 17
<211> 701
<212> DNA
<213> Homo sapiens

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gcgcggcgctg agccctcccc cttgggatcc cgcagctgac cagtcgcgct gacggacaga      180
cagacagaca ccgccccag cccagttac cacctcctcc ccggccggcg gcggacagtg      240
gacgcggcgg cgagccgcgg gcagggggccg gagcccggcc ccggaggcgg ggtggagggg      300
gtcggagctc gcggcgctgc actgaaactt ttcgtccaac ttctgggctg ttctcgcttc      360
ggaggagccg tgggtccgcgc gggggaagcc gagccgagcg gagccgcgag aagtgctagc      420
tcggggccggg aggagccgca gccggaggag ggggaggagg aagaagagaa ggaagaggag      480
agggggccgc agtggcgact cggcgctcgg aagccgggct catggacggg tgaggcggcg      540
gtgtgcgcag acagtgtctc agcgcgcgcg ctccccagcc ctggcccggc ctcgggccgg      600
gaggaagagt agctcgccga ggcgccgagg agagcggggc gcccacagc ccgagccgga      660
gagggacgcg agccgcgcgc cccggtcggg cctccgaaac c                                     701

<210> 18
<211> 1892
<212> DNA
<213> Homo sapiens

<400> 18
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cgacagaaca gtccttaatc cagaaacctg aaatgaagga agaggagact ctgcgcagag      180
cactttgggt ccggagggcg agactccggc ggaagcattc ccgggcgggt gaccagcac      240
ggtccctctt ggaattggat tcgccatttt atttttcttg ctgctaaatc accgagcccg      300
gaagattaga gagttttatt tctgggattc ctgtagacac acccaccac atacatacat      360

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tcctctcccc	tgcccaagaa	tgtgcaaggc	cagggcatgg	gggcaaatat	gacccagttt	660
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cagagaaaag	agaaagtgtt	ttatatacgg	tacttattta	atatcccttt	ttaattagaa	1260
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tattgggcaa	cttgatatttg	tgtgtatata	tatatatata	tgtttatgta	tatatgtgat	1620
cctgaaaaaa	taaacatcgc	tattctgttt	tttatatggt	caaaccaaac	aagaaaaaat	1680
agagaattct	acatactaaa	tctctctcct	tttttaattt	taatatttgt	tatcatttat	1740
ttattggtgc	tactgtttat	ccgtaataat	tgtggggaaa	agatattaac	atcacgtctt	1800
tgtctctagt	gcagtttttc	gagatatccc	gtagtacata	tttattttta	aacaacgaca	1860
aagaaataca	gatatatctt	aaaaaaaaaa	aa			1892

<210> 19

<211> 249

<212> RNA

<213> Homo sapiens

<400> 19

ccgggcucau	ggacggguga	ggcggcgguu	ugcgcagaca	gugcuccagc	gcgcgcgcuc	60
------------	------------	------------	------------	------------	------------	----

cccagcccug gcccggccuc gggccgggag gaagaguagc ucgccgaggc gccgaggaga 120  
 gcgggccgcc ccacagcccg agccggagag ggacgcgagc cgcgcgcccc ggucggggccu 180  
 ccgaaaccuau gaacuuucug cugucuuggg ugcauuggag ccuugccuug cugcucuacc 240  
 uccaccaug 249

<210> 20  
 <211> 15  
 <212> RNA  
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<220>  
 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE) cluster of 3'untranslated region

<220>  
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 <222> (1)..(15)  
 <223> n = a, t, g or c

<400> 20  
 nauuuauuuu uuan 15

<210> 21  
 <211> 49  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
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<210> 22  
 <211> 1141  
 <212> DNA  
 <213> Homo sapiens

<400> 22  
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 cagtgaatgt gtctggacct catgttggtg aggtgtcac agtcctgagt gtggacttgg 420  
 caggtgcctg ttgaatctga gctgcaggtt ccttatctgt cacacctgtg cctcctcaga 480  
 ggacagtttt tttgttggtg tgtttttttg tttttttttt ttggtagatg catgacttgt 540



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aaagccattc taagtcattg gggaaacggg gtgaacttca ggtggatgag gagacagaat	720
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gcccaggctc ccgctttctt tggaggcagc agctcccgcg gggctgaagt ctggcgtaag	1020
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c	1141

<210> 23  
 <211> 247  
 <212> DNA  
 <213> Homo sapiens

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aggccacctc gtcggcgtcc gcccgagtcc ccgcctcgcc gccaacgcca caaccaccgc	180
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gcagcag	247

<210> 24  
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 <212> DNA  
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gttttgcaac gtttacaccg actagccagg aagtacttcc acctcgggca ctttttggga	180
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ttacttcaat gggctcttcc aacaaggaag aagcttgctg gtagcacttg ctaccctgag	420

t t c a t c c a g g	c c c a a c t g t g	a g c a a g g a g c	a c a a g c c a c a	a g t c t t c c a g	a g g a t g c t t g	480
a t t c c a g t g g	t t c t g c t t c a	a g g c t t c c a c	t g c a a a c a c	t a a a g a t c c a	a g a a g g c c t t	540
c a t g g c c c c a	g c a g g c c g g a	t c g g t a c t g t	a t c a a g t c a t	g g c a g g t a c a	g t a g g a t a a g	600
c c a c t c t g t c	c c t t c c t g g g	c a a a g a a g a a	a c g g a g g g g a	t g a a t t c t t c	c t t a g a c t t a	660
c t t t t g t a a a	a a t g t c c c c a	c g g t a c t t a c	t c c c c a c t g a	t g g a c c a g t g	g t t t c c a g t c	720
a t g a g c g t t a	g a c t g a c t t g	t t t g t c t t c c	a t t c c a t t g t	t t t g a a a c t c	a g t a t g c c g c	780
c c c t g t c t t g	c t g t c a t g a a	a t c a g c a a g a	g a g g a t g a c a	c a t c a a a t a a	t a a c t c g g a t	840
t c c a g c c c a c	a t t g g a t t c a	t c a g c a t t t g	g a c c a a t a g c	c c a c a g c t g a	g a a t g t g g a a	900
t a c c t a a g g a	t a a c a c c g c t	t t t g t t c t c g	c a a a a c g t a	t c t c c t a a t t	t g a g g c t c a g	960
a t g a a a t g c a	t c a g g t c c t t	t g g g g c a t a g	a t c a g a a g a c	t a c a a a a a t g	a a g c t g c t c t	1020
g a a a t c t c c t	t t a g c c a t c a	c c c c a a c c c c	c c a a a a t t a g	t t t g t g t t a c	t t a t g g a a g a	1080
t a g t t t t c t c	c t t t t a c t t c	a c t t c a a a a g	c t t t t t a c t c	a a a g a g t a t a	t g t t c c c t c c	1140
a g g t c a g c t g	c c c c c a a a c c	c c c t c c t t a c	g c t t t g t c a c	a c a a a a a g t g	t c t c t g c c t t	1200
g a g t c a t c t a	t t c a a g c a c t	t a c a g c t c t g	g c c a c a a c a g	g g c a t t t t a c	a g g t g c g a a t	1260
g a c a g t a g c a	t t a t g a g t a g	t g t g a a t t c a	g g t a g t a a a t	a t g a a a c t a g	g g t t t g a a a t	1320
t g a t a a t g c t	t t c a c a a c a t	t t g c a g a t g t	t t t a g a a g g a	a a a a a g t t c c	t t c c t a a a a t	1380
a a t t t c t c t a	c a a t t g g a a g	a t t g g a a g a t	t c a g c t a g t t	a g g a g c c c a t	t t t t t c c t a a	1440
t c t g t g t g t g	c c c t g t a a c c	t g a c t g g t t a	a c a g c a g t c c	t t t g t a a a c a	g t g t t t t a a a	1500
c t c t c c t a g t	c a a t a t c c a c	c c c a t c c a a t	t t a t c a a g g a	a g a a a t g g t t	c a g a a a a t a t	1560
t t t c a g c c t a	c a g t t a t g t t	c a g t c a c a c a	c a c a t a c a a a	a t g t t c c t t t	t g c t t t t a a a	1620
g t a a t t t t t g	a c t c c c a g a t	c a g t c a g a g c	c c c t a c a g c a	t t g t t a a g a a	a g t a t t t g a t	1680
t t t t g t c t c a	a t g a a a a t a a	a a c t a t a t t c	a t t t c c			1716

<210> 25  
 <211> 160  
 <212> DNA  
 <213> Homo sapiens

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	c g a g c a g g g t	c t c c g g g t g g	g c g g c g c g a c	g c c c c g c g c a	g g c t g g a g g c	c g c c g a g g c t	120
	c g c c a t g c c g	g g a g a a c t c t	a a c t c c c c c a	t g g a g t c g g c			160

<210> 26  
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 <212> DNA

<213> Homo sapiens

<400> 26

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gtgcctcctg aaagcctggc ctgctccgcg tgtcccctcc ctccctctgc gccggacttg      180
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 gggatatggg gtgggttttt aaatctcgtt tctcttggtt aagcacaggg atctcgttct 240  
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 <212> DNA  
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 <212> DNA  
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 <213> Homo sapiens

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<210> 41  
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<212> DNA  
<213> Homo sapiens

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<210> 42  
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<212> DNA  
<213> Homo sapiens

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aatatgatct attttatgca tattgtttat aaagacacat ttacaattta cttttaatat 180  
taaaaattac catattatga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 233

<210> 43  
<211> 349

<212> DNA  
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 gtgagctggg tggccttaac agcagggtg gttggctggaa cgcggtgccc agatggctcag 300  
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<210> 44  
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 <213> Homo sapiens

<400> 44  
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 gaatgcaata caatttgaag atcagatatt tctccctttg tgagaatttc tcagtatgtg 480  
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 <212> DNA  
 <213> Homo sapiens

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 <213> Homo sapiens

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<210> 63  
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 <212> DNA  
 <213> Homo sapiens

<400> 63	
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<210> 64  
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 <212> DNA  
 <213> Homo sapiens

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<210> 66  
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 <212> DNA

<213> Homo sapiens

<400> 66

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<210> 67

<211> 99

<212> DNA

<213> Homo sapiens

<400> 67

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cgagagccatg gggccggagc cgcagtgagc accatggag 99

<210> 68  
<211> 614  
<212> DNA  
<213> Homo sapiens

<400> 68  
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tatattttgg aaaa 614

<210> 69  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer 1 for amplify VEGF 5'UTR

<400> 69  
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<210> 70  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer 2 for amplify VEGF 5'UTR

<400> 70  
tttgcgactg gtcagctgcg ggatcccaag 30

<210> 71  
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<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer 3 for amplify VEGF 5'UTR  
  
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 <210> 72  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer 4 for amplify VEGF 5'UTR  
  
 <400> 72  
 aaacccgggc agcaaggcaa ggctccaatg cac 33  
  
 <210> 73  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer 5 for amplify VEGF 3'UTR  
  
 <400> 73  
 gccgggacagg aggaaggagc ctccctcagg gtttcggga 39  
  
 <210> 74  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer 6 for amplify VEGF 3'UTR  
  
 <400> 74  
  
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 <210> 75  
 <211> 66  
 <212> DNA  
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 gaacaaatgt cgacgggggc ccctagcaga tctagcgctg gatcccccg ggagctcaug 60  
  
 gaagac 66  
  
 <210> 76  
 <211> 30

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer for luciferase amplification  
  
 <400> 76  
 cggtgttggg cgcgttatatt atcggagttg 30  
  
 <210> 77  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer for luciferase amplification  
  
 <400> 77  
 ttggcgaaga atgaaaatag ggttggtact 30  
  
 <210> 78  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer for GAPDH amplification  
  
 <400> 78  
 ggtgaaggtc ggagtcaacg ga 22  
  
 <210> 79  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer for GAPDH amplification  
  
 <400> 79  
 gagggatctc gctcctggaa g 21  
  
 <210> 80  
 <211> 55  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 5'UTR forward oligo  
  
 <400> 80  
 aaagtcgacg taaccgccag atttgaatcg cgggaccctg tggcagaggt ggcgg 55  
  
 <210> 81

<211> 54  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: 5'UTR reverse oligo  
  
 <400> 81  
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 <210> 82  
  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 3'UTR forward oligo  
  
 <400> 82  
 aaagcgccg cggcctctgc cggagctgcc tgggccaga 40  
  
 <210> 83  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: 3'UTR reverse oligo  
  
 <400> 83  
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 <210> 84  
 <211> 67  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: SL top oligonucleotide  
  
 <400> 84  
 ctagaagctt agggccgcg atccgcgcgc ggttcgccgc gcgcggatcc gcggtagcaa 60  
 gttagtc 67  
  
 <210> 85  
 <211> 68  
  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: SL bottom oligonucleotide  
  
 <400> 85

gactaagctt gctaccgcgg atccgcgcgc ggcgaaccgc gcgcggatcc gcggccctaa 60  
gcttctag 68

<210> 86  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer (Sense/HindIII)

<400> 86  
caagaagctt gcgcccggcc cccaccct cg 32

<210> 87  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer (Antisense/NcoI)

<400> 87  
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<210> 88  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: PCR primer (Sense/BglII)

<400> 88  
agactctgaa ccagaaggcc aa 22

<210> 89  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer (Antisense/KpnI)

<400> 89  
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<210> 90  
<211> 58  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: sense minus uORF HindIII primer

<400> 90  
 cccaagcttc gcgcccggcc cccacccct cgcagcacc cgcgccccgc gccctccc 58

<210> 91  
 <211> 61  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Antisense minus uORF NcoI primer

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<210> 92  
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<220>  
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